

Name \_\_\_\_\_

### Ch 15 Test Study Guide CP Living

Define the following terms:

Mixture-

Solute-

Homogeneous-

Dissociation-

Heterogeneous-

Solubility-

Electrolyte-

Saturated-

Nonelectrolyte-

Unsaturated-

Solvent-

Supersaturated-

Use the solubility curve on the handout I gave you to answer the following questions:

1. What is the solubility of potassium nitrate in 100 grams of water at 80°C ? \_\_\_\_\_
2. What is the solubility of sodium chloride in 100 grams of water at 90°C ? \_\_\_\_\_
3. What is the minimum temperature needed to dissolve 38 grams of sodium chloride in 100 grams of water? \_\_\_\_\_
4. If 120 grams of potassium chloride are mixed with 100 grams of water at 85°C, how much will *not* dissolve? \_\_\_\_\_
5. How much potassium nitrate will dissolve in *50 grams of water* at 60°C? \_\_\_\_\_
6. An amount of 100 grams of water at 90°C are saturated with potassium chloride. If this solution is cooled to 35°C, how much of the solid will precipitate? \_\_\_\_\_

What is the biggest difference between ionic and covalent substance when they dissolve? What to solutions of ionic compounds do that covalent compounds cannot?

How does solubility differ between gases and solids according to temperature?

How does pressure on a gas affect solubility of that gas? Give an example.

Why doesn't oil dissolve in water? What is the rule of thumb about solubility and polarity?

Calculate the following molar concentrations:

12 grams of  $\text{MgCl}_2$  in 240 mL of solution

98 grams of KOH in 2.2 liters of solution

How many grams of each solute do you need to make the following aqueous solutions?

0.450 L of 2.0 M NaOH

150 mL of 2.0 M  $\text{LiNO}_3$